

In the Claims

Please amend claim 5 and add new claims 12-25.

- 1 1. (Original) A system for adaptively rendering, to users of a network application, a
2 plurality of content pages generated from among a plurality of content objects created by an
3 author of the application, the system comprising:
- 4 (a) a database of information relating to the application and its users, and including at
5 least one of the following types of information:
- 6 (i) user profile data;
7 (ii) user platform data;
8 (iii) observed user behavioral data;
9 (iv) aggregate or cumulative profile, platform, or behavioral data from
10 multiple users; and
11 (v) application state data;
- 12 (b) one or more application rules for directing the system to select dynamically:
13 (i) one or more of the plurality of content objects, reference implicitly in the
14 rules via an expression that relates to one or more goals of the author;
15 (ii) one or more users of the application that may receive the selected content
16 objects; and
17 (iii) one or more application state conditions under which the selected content
18 will be delivered to the selected users;
- 19 and
- 20 (c) an engine for interpreting the application rules dynamically and generating and
21 delivering content pages over the network to users of the application.

- 1 2. (Previously Amended) A system for adaptively rendering, to users of a network
2 application, a plurality of content pages generated from among a plurality of content objects
3 created by an author of the application, the system comprising:
- 4 (a) one or more databases for storing information relating to the application and its
5 users, including:

- 6 (i) individual, cumulative or aggregate user profile, platform and behavioral
7 data;
8 (ii) content objects created by the author of the application at a plurality of
9 levels of abstraction, including a plurality of interconnected pages and a
10 plurality of intra-page content objects;
11 (iii) application state data; and
12 (iv) application rules directing the system to select one or more of the content
13 objects for delivery to one or more users of the application if one or more
14 conditions relating to the application state data are satisfied;

15 and

- 16 (b) a dynamic content composition engine for interpreting the application rules
17 dynamically and generating and delivering content pages over the network to
18 users of the application, the engine including:
19 (i) a first manager for interpreting the application rules to select page content
20 objects to be delivered to users of the application; and
21 (ii) a second manager for interpreting the application rules to select intra-page
22 content objects, wherein the content pages delivered to users are generated
23 in part by including the selected intra-page content objects within the
24 selected page content objects.

1 3. (Original) A method for adaptively rendering, to users of a network application, a
2 plurality of content pages generated from among a plurality of content objects created by an
3 author of the application, the method comprising the following steps:

- 4 (a) storing in a database information relating to the application and its users, and
5 including at least one of the following types of information:
6 (i) user profile data;
7 (ii) user platform data;
8 (iii) observed user behavioral data;
9 (iv) aggregate or cumulative profile, platform or behavioral data from multiple
10 users; and
11 (v) application state data;

- 12 (b) creating one or more application rules for directing the system to select
13 dynamically:
- 14 (i) one or more of the plurality of content objects, referenced implicitly in the
15 rules via an expression that relates to one or more goals of the author;
16 (ii) one or more users of the application that may receive the selected content
17 objects; and
18 (iii) one or more application state conditions under which the selected content
19 will be delivered to the selected users;
- 20 and
- 21 (c) interpreting the application rules dynamically and generating and delivering
22 content pages over the network to users of the application.
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- 1 4. (Previously Added) The system of claim 2 wherein the first manager for interpreting the
2 application rules to select page content objects to be delivered to users of the application
3 performs the following steps in selecting the page content objects to be delivered to a particular
4 user:
- 5 (a) obtains profile, platform, or behavioral data specific to the user;
6 (b) obtains global, aggregate data regarding profiles and behavior of other users;
7 (c) determines a potential sequence of interconnected content pages to be delivered to
8 the user;
9 (d) calculates variables based upon the data specific to the user in order to determine
10 the next content page or content pages and links to subsequent content pages to be
11 delivered to the user; and
12 (e) recalculates the variables in order to determine the next content page or content
13 pages and links to subsequent content pages to be delivered to the user, whenever
14 the user requests another content page.

- 1 5. (Currently Amended) The system of claim 2 wherein the intra-page content objects
2 selected by the second manager for interpreting the application rules comprise objects that may
3 be invoked from server-side or client-side applications and that dynamically render content pages
4 based on user profile, platform, and behavioral data, [or] and interactive responses of a user.

1 6. (Previously Added) The system of claim 5 wherein the content objects adaptively render
2 HTML within the content pages.

1 7. (Previously Added) The method of claim 3, wherein the next content page to be viewed
2 by a user is pre-fetched and delivered to the user's web browser while the user views the current
3 content page, with such pre-fetching based on the user's profile, platform, or behavioral data.

1 8. (Previously Added) A system for adaptively rendering, to users of a network application,
2 a plurality of content pages generated from among a plurality of content objects, the system
3 comprising:

4 (a) a database of information relating to the application and its users, and including
5 the following types of information:

- 6 (i) user profile data;
7 (ii) user platform data;
8 (iii) observed user behavioral data;
9 (iv) aggregate or cumulative profile, platform, and behavioral data from
10 multiple users; and
11 (v) application state data;

12 (b) a database of content objects, the content objects comprising:

- 13 (i) one or more dynamic pages;
14 (ii) one or more dynamic stacks within each page;
15 (iii) one or more dynamic content elements within each stack; and
16 (iv) one or more primitive objects within each content element;

17 (c) one or more application rules for directing the system to select dynamically:

- 18 (i) one or more of the plurality of content objects, referenced implicitly in the
19 rules via an expression that relates to one or more goals of the author;
20 (ii) one or more users of the application that may receive the selected content
21 objects; and
22 (iii) one or more application state conditions under which the selected content
23 will be delivered to the selected users;

24 and

25 (d) an engine for interpreting the application rules dynamically and generating and
26 delivering content pages over the network to users of the application.

1 9. (Previously Added) A system for adaptively rendering, to users of a network application,
2 a plurality of content pages generated dynamically from among a plurality of content objects
3 created by an author of the application, the system comprising:

4 (a) a database of information relating to the application and its users, and including
5 the following types of information:

- 6 (i) user profile data;
7 (ii) user platform data;
8 (iii) observed user behavioral data;
9 (iv) aggregate or cumulative profile, platform, and behavioral data from
10 multiple users; and
11 (v) application state data;

12 (b) one or more application rules for directing the system to select dynamically:

- 13 (i) one or more of the plurality of content objects, referenced implicitly in the
14 rules via an expression that relates to one or more goals of the author, the
15 plurality of content objects comprising:
16 (1) one or more dynamic pages;
17 (2) one or more dynamic stacks within each page;
18 (3) one or more dynamic content elements within each stack; and
19 (4) one or more primitive objects within each content element;
20 (ii) one or more users of the application that may receive the selected content
21 objects; and
22 (iii) one or more application state conditions under which the selected content
23 will be delivered to the selected users;

24 and

25 (c) an engine for interpreting the application rules dynamically and generating and
26 delivering content pages over the network to users of the application.

1 10. (Previously Added) A system for adaptively rendering, to users of a network application,
2 a plurality of content pages generated dynamically from among a plurality of content objects
3 created by an author of the application, the system comprising:

- 4 (a) one or more databases for storing information relating to the application and its
5 users, the information including:
6 (i) individual user profile data, cumulative or aggregate user profile data, user
7 platform data, and observed user behavioral data;
8 (ii) content objects created by the author of the application at a plurality of
9 levels of abstraction, the plurality of content objects comprising:
10 (1) one or more dynamic pages;
11 (2) one or more dynamic stacks within each page;
12 (3) one or more dynamic content elements within each stack; and
13 (4) one or more primitive objects within each content element;
14 (iii) application state data; and
15 (iv) application rules directing the system to select one or more of the intra-
16 page content objects for delivery to one or more users of the application if
17 one or more conditions relating to the application state data are satisfied;

18 and

- 19 (b) a dynamic content composition engine for interpreting the application rules
20 dynamically and generating and delivering content pages over the network to
21 users of the application, the engine including:
22 (i) a first manager for interpreting the application rules to select the dynamic
23 page content objects to be delivered to users of the application; and
24 (ii) a second manager for interpreting the application rules to select intra-page
25 content objects, wherein the content pages delivered to users are generated
26 in part by including the selected intra-page content objects within the
27 selected dynamic page content objects.

1 11. (Previously Added) A system for adaptively rendering, to users of a network application,
2 a plurality of content pages generated dynamically from among a plurality of content objects
3 created by an author of the application, the system comprising:

- 4 (a) a database of information relating to the application and its users, and including
5 the following types of information:
6 (i) user profile data;
7 (ii) user platform data;
8 (iii) observed user behavioral data;
9 (iv) aggregate or cumulative profile, platform, and behavioral data from
10 multiple users; and
11 (v) application state data;
12 (b) one or more application rules for directing the system to select dynamically:
13 (i) one or more of the plurality of content objects, referenced implicitly in the
14 rules via an expression that relates to one or more goals of the author, the
15 plurality of content objects comprising objects that may be invoked from
16 server-side or client-side applications and that dynamically render content
17 pages based on profile, platform, and behavioral data, and application state
18 data of a user;
19 (ii) one or more users of the application that may receive the selected content
20 objects; and
21 (iii) one or more application state conditions under which the selected content
22 will be delivered to the selected users;
23 and
24 (c) an engine for interpreting the application rules dynamically and generating and
25 delivering content pages over the network to users of the application.
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1 12. (New) A system for adaptively rendering, to users of a network application, a plurality of
2 content pages generated from among a plurality of content objects created by an author of the
3 application, the system comprising:

- 4 (a) a database of information relating to the application and its users, and including
5 the following types of information:
6 (i) user profile data;
7 (ii) user platform data;
8 (iii) observed user behavioral data;

- 9 (iv) aggregate or cumulative profile, platform, or behavioral data from
10 multiple users; and
11 (v) application state data;
12 (b) one or more application rules for directing the system to select dynamically:
13 (i) one or more of the plurality of content objects, referenced implicitly in the
14 rules via an expression that relates to one or more goals of the author;
15 (ii) one or more users of the application that may receive the selected content
16 objects; and
17 (iii) one or more application state conditions under which the selected content
18 will be delivered to the selected users;
19 and
20 (c) an engine for interpreting the application rules dynamically and generating and
21 delivering content pages over the network to users of the application, wherein
22 such interpretation of the application rules is based at least in part on the user
23 platform data.

- 1 13. (New) A system for adaptively rendering, to users of a network application, a plurality of
2 content pages generated from among a plurality of content objects created by an author of the
3 application, the system comprising:
4 (a) one or more databases for storing information relating to the application and its
5 users, including:
6 (i) individual and aggregate user profile, platform and behavioral data;
7 (ii) content objects created by the author of the application at a plurality of
8 levels of abstraction, including a plurality of interconnected pages and a
9 plurality of intra-page content objects;
10 (iii) application state data; and
11 (iv) application rules directing the system to select one or more of the content
12 objects for delivery to one or more users of the application if one or more
13 conditions relating to the application state data are satisfied;
14 and

- 15 (b) a dynamic content composition engine for interpreting the application rules
16 dynamically and generating and delivering content pages over the network to
17 users of the application, wherein such interpretation of the application rules is
18 based at least in part on the user platform data, the engine including:
19 (i) a first manager for interpreting the application rules to select page content
20 objects to be delivered to users of the application; and
21 (ii) a second manager for interpreting the application rules to select intra-page
22 content objects, wherein the content pages delivered to users are generated
23 in part by including the selected intra-page content objects within the
24 selected page content objects.

- 1 14. (New) The system of claim 13 wherein the first manager for interpreting the application
2 rules to select page content objects to be delivered to users of the application performs the
3 following steps in selecting the page content objects to be delivered to a particular user:
4 (a) obtains profile, platform, and behavioral data specific to the user;
5 (b) obtains global, aggregate data regarding profiles and behavior of other users;
6 (c) determines a potential sequence of interconnected content pages to be delivered to
7 the user;
8 (d) calculates variables based upon the data specific to the user in order to determine
9 the next content page or content pages and links to subsequent content pages to be
10 delivered to the user; and
11 (e) recalculates the variables in order to determine the next content page or content
12 pages and links to subsequent content pages to be delivered to the user, whenever
13 the user requests another content page.

- 1 15. (New) A method for adaptively rendering, to users of a network application, a plurality of
2 content pages generated from among a plurality of content objects created by an author of the
3 application, the method comprising the following steps:
4 (a) storing in a database information relating to the application and its users, and
5 including the following types of information:
6 (i) user profile data;

- 7 (ii) user platform data;
8 (iii) observed user behavioral data;
9 (iv) aggregate or cumulative profile, platform or behavioral data from multiple
10 users; and
11 (v) application state data;
12 (b) creating one or more application rules for directing the system to select
13 dynamically:
14 (i) one or more of the plurality of content objects, referenced implicitly in the
15 rules via an expression that relates to one or more goals of the author;
16 (ii) one or more users of the application that may receive the selected content
17 objects; and
18 (iii) one or more application state conditions under which the selected content
19 will be delivered to the selected users;
20 and
21 (c) interpreting the application rules dynamically and generating and delivering
22 content pages over the network to users of the application, wherein such
23 interpretation of the application rules is based at least in part on the user platform
24 data.

1 16. (New) A system for adaptively rendering, to users of a network application, a plurality of
2 content pages generated from among a plurality of content objects, the system comprising:

- 3 (b) a database of information relating to the application and its users, and including
4 the following types of information:
5 (i) user profile data;
6 (ii) user platform data;
7 (iii) observed user behavioral data;
8 (iv) aggregate or cumulative profile, platform, and behavioral data from
9 multiple users; and
10 (v) application state data;
11 (b) a database of content objects, the content objects comprising:
12 (i) one or more dynamic pages;

- (ii) one or more dynamic stacks within each page;
 - (iii) one or more dynamic content elements within each stack; and
 - (iv) one or more primitive objects within each content element;
- (c) one or more application rules for directing the system to select dynamically:
 - (i) one or more of the plurality of content objects, referenced implicitly in the rules via an expression that relates to one or more goals of the author;
 - (ii) one or more users of the application that may receive the selected content objects; and
 - (iii) one or more application state conditions under which the selected content will be delivered to the selected users;
- and
- (d) an engine for interpreting the application rules dynamically and generating and delivering content pages over the network to users of the application, wherein such interpretation of the application rules is based at least in part on the user platform data.

17. (New) A system for adaptively rendering, to users of a network application, a plurality of content pages generated dynamically from among a plurality of content objects created by an author of the application, the system comprising:

- (a) a database of information relating to the application and its users, and including the following types of information:
 - (i) user profile data;
 - (ii) user platform data;
 - (iii) observed user behavioral data;
 - (iv) aggregate or cumulative profile, platform, and behavioral data from multiple users; and
 - (v) application state data;
- (b) one or more application rules for directing the system to select dynamically:
 - (i) one or more of the plurality of content objects, referenced implicitly in the rules via an expression that relates to one or more goals of the author, the plurality of content objects comprising:

- 16 (1) one or more dynamic pages;
17 (2) one or more dynamic stacks within each page;
18 (3) one or more dynamic content elements within each stack; and
19 (4) one or more primitive objects within each content element;
20 (ii) one or more users of the application that may receive the selected content
21 objects; and
22 (iii) one or more application state conditions under which the selected content
23 will be delivered to the selected users;
24 and
25 (c) an engine for interpreting the application rules dynamically and generating and
26 delivering content pages over the network to users of the application, wherein
27 such interpretation of the application rules is based at least in part on the user
28 platform data.

1 18. (New) A system for adaptively rendering, to users of a network application, a plurality of
2 content pages generated dynamically from among a plurality of content objects created by an
3 author of the application, the system comprising:

- 4 (a) one or more databases for storing information relating to the application and its
5 users, the information including:
6 (i) individual user profile data, aggregate user profile data, user platform data,
7 and observed user behavioral data;
8 (ii) content objects created by the author of the application at a plurality of
9 levels of abstraction, the plurality of content objects comprising:
10 (1) one or more dynamic pages;
11 (2) one or more dynamic stacks within each page;
12 (3) one or more dynamic content elements within each stack; and
13 (4) one or more primitive objects within each content element;
14 (iv) application state data; and
15 (v) application rules directing the system to select one or more of the intra-
16 page content objects for delivery to one or more users of the application if
17 one or more conditions relating to the application state data are satisfied;

18 and

19 (b) a dynamic content composition engine for interpreting the application rules
20 dynamically and generating and delivering content pages over the network to
21 users of the application, wherein such interpretation of the application rules is
22 based at least in part on the user platform data, the engine including:

- 23 (i) a first manager for interpreting the application rules to select the dynamic
24 page content objects to be delivered to users of the application; and
25 (ii) a second manager for interpreting the application rules to select intra-page
26 content objects, wherein the content pages delivered to users are generated
27 in part by including the selected intra-page content objects within the
28 selected dynamic page content objects.

1 19. (New) A system for adaptively rendering, to users of a network application, a plurality of
2 content pages generated dynamically from among a plurality of content objects created by an
3 author of the application, the system comprising:

4 (b) a database of information relating to the application and its users, and including
5 the following types of information:

- 6 (i) user profile data;
7 (ii) user platform data;
8 (iii) observed user behavioral data;
9 (iv) aggregate or cumulative profile, platform, and behavioral data from
10 multiple users; and
11 (v) application state data;

12 (b) one or more application rules for directing the system to select dynamically:

- 13 (i) one or more of the plurality of content objects, referenced implicitly in the
14 rules via an expression that relates to one or more goals of the author, the
15 plurality of content objects comprising objects that may be invoked from
16 server-side or client-side applications and that dynamically render content
17 pages based on profile, platform, and behavioral data, and application state
18 data of a user;

19 (ii) one or more users of the application that may receive the selected content
20 objects; and
21 (iii) one or more application state conditions under which the selected content
22 will be delivered to the selected users;
23 and
24 (c) an engine for interpreting the application rules dynamically and generating and
25 delivering content pages over the network to users of the application, wherein
26 such interpretation of the application rules is based at least in part on the user
27 platform data.

1 20. (New) The system of claim 1 wherein the system is also directed to select dynamically a
2 plurality of templates for determining the size and location of the selected content objects that
3 will be delivered to the selected users.

1 21. (New) The system of claim 12 wherein the system is also directed to select dynamically a
2 plurality of templates for determining the size and location of the selected content objects that
3 will be delivered to the selected users.

1 22. (New) The system of claim 9 wherein the plurality of content objects also comprises one
2 or more templates within each page.

1 23. (New) The system of claim 1 wherein the selection of content objects occurs at run-time.

1 24. (New) The system of claim 12 wherein the selection of content objects occurs at run-
2 time.

1 25. (New) The system of claim 9 wherein the application rule for directing the system to
2 select dynamically one or more of the plurality of content objects uses weights associated with
3 each primitive object to select the content objects.